

Should we treat strep throat with antibiotics?

I congratulate Drs Worrall, Hutchinson, Sherman, and Griffiths on their research article in the April 2007 issue of *Canadian Family Physician*.¹ They compared rapid antigen detection tests and clinical examination for differentiating sore throats of viral and bacterial etiology. They concluded that use of rapid antigen detection kits in primary care settings could reduce the prescribing rate of antibiotics for sore throats.

An equally interesting question is, Why do we treat sore throats with antibiotics at all?

As mentioned in the article, symptoms caused by a bacterial sore throat fail to clear much faster when treated with antibiotics than they would if left alone.

Do we treat to prevent rheumatic fever and glomerulonephritis? There is no convincing evidence that, for the Western world, treating streptococcal sore throats with penicillin prevents either of these conditions. Common sense might tell us that if we were to consider the number of patients who do not visit their doctors when they have sore throats and the cases of bacterial sore throats that do not receive antibiotics because we misdiagnose them as viral, there must be thousands of cases of untreated strep throat every year in this country alone. Should we then not be seeing more rheumatic fever and glomerulonephritis?

Do we treat because we feel that patients expect antibiotics? Many of my patients are terrified of strep. Mothers who fail to vaccinate their children because they do not believe in tetanus, polio, diphtheria, and pertussis ("and vaccination is so unnatural, Doctor") will rush those same children into my office every time they have sore throats. It is certainly easier and quicker to hand out prescriptions every time than to explain and reassure. Each time we do this, however, we reinforce patients' fears.

Do family physicians have to declare a conflict of interest in answering these questions? If we were to lower ourselves to examining the vulgar subject of money, it is certainly in our financial interest to keep many patients scared enough to rush to our offices whenever they get sore throats.

In view of the large number of antibiotics prescribed for sore throats, perhaps it is time to review whether we should be using such treatment for strep throat infections at all.

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Reference

1. Worrall G, Hutchinson J, Sherman G, Griffiths J. Diagnosing streptococcal sore throat in adults. Randomized controlled trial of in-office aids. *Can Fam Physician* 2007;53:666-71.

Recommend ω -3 fatty acids in pregnancy?

Thank you for your Motherisk Update on ω -3 fatty acid supplementation during pregnancy.¹ I agree that the essential fatty acids linoleic acid, α -linolenic acid, docosahexaenoic acid (DHA), eicosapentenoic acid, and arachidonic acid are all essential components of the human brain and are all required for normal brain development and function.

It is important to remember the effects of ω -3 fatty acids on cell and cell membrane function. Docosahexaenoic acid has "significant effects on photoreceptor membranes and neurotransmitters involved in the signal transduction process; rhodopsin activation, rod and cone development, neuronal dendritic connectivity, and functional maturation of the central nervous system."²

I also agree that ω -3 fatty acids benefit preeclampsia, or pregnancy-induced hypertension, in observational studies. Reference 10,³ however, is used in the article for both observational and interventional trials. Which is it?

Second, reference 11⁴ is used in the article to indicate that this interventional trial does not support benefit in preventing preeclampsia, when the opposite is true. This article showed improvement in gestational age (primary outcome) by about 6 days, which was statistically significant. It also showed improvement of birth weight (primary outcome), length, and head circumference (secondary outcomes), but these improvements were not statistically significant. Preeclampsia was not discussed beyond being listed in Table 3 of the article. Those taking high levels of DHA (interventional group) had a relative risk reduction of about 50% for developing preeclampsia and the number needed to treat to prevent 1 case of preeclampsia was 30, which certainly favours some benefit. Please explain.

The recent study⁵ that shows potential harm from ω -3 fatty acids and fish consumption is done in a community that traditionally has a high fish intake and might have an unaccounted confounder. Background levels of methylmercury were not taken in this population—a major concern in similar populations.⁶ It is recognized that hypertension has been induced by chronic ingestion of methylmercury among rats.⁷ Human exposure is a relatively new area of medicine and information is exploding at this time. The reason for the adverse outcome of the study might relate to toxicity, a point not mentioned in the article.

Third, I am disturbed by the conclusion of the article that no recommendations should be made to encourage women to take ω -3 fatty acid supplements. It has been estimated that the brain alone accumulates 67 mg DHA daily in the third trimester.⁸ Canada was the first country to recommend fatty acid intake, and international guidelines have been making recommendations since 1999.